Eating for a Healthy Mind

Nutrition and Food Sciences
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Dementia Prevalence

• **Alzheimer’s Dementia:**
  – Most common form
  – 5.4 million adults

• **Other forms:**
  – Mild Cognitive Impairment
  – Other dementias
Best Methods of Prevention

Managing Risk Factors
Non-Modifiable Risk Factors

• **Age**
  – Risk doubles every 5 years after 65
  – 1/3 of individuals 85+ have AD

• **Family History**
  – Parent, sibling, or child with AD

• **Genetics**
Modifiable Risk Factors

• **Head Trauma:**
  - Manage fall risks
  - Wear a helmet when biking
  - Balance training
Modifiable Risk Factors

• **Maintain heart health**
  – Manage blood pressure
  – Manage cholesterol (LDL)
  – Manage diabetes
  – Manage stroke risk
Modifiable Risk Factors

• **Healthy Lifestyle**
  – Avoid tobacco use
  – Avoid excess alcohol use/abuse
  – Exercise regularly
  – Maintain social connections
  – Mental stimulation
What About Diet?

• Several dietary patterns may be protective.

• Any diet that promotes heart and vascular health is likely to be helpful.
Mediterranean Diet: What is it?

**Vegetables:** 2+ daily

**Fruit:** 3+ daily

**Whole grains:** 2+ daily

**Nuts:** 5+ per week

**Beans:** 3+ per week

**Fish:** 3+ per week

**Olive oil:** 4 Tbsp/day
Mediterranean Diet: Observational Research

- **NHANES (US) and MABATZAHAV (Israel):**
  - High Med diet adherence associated with better cognitive & physical function

- **SUN (Spain):**
  - High Med adherence associated with slower cognitive decline

- **EPIC (Greece):**
  - High Med diet associated less cognitive decline
Mediterranean Diet: Observational Research

- **Bordeaux 3 City (France):**
  - Med Diet adherence associated with more preserved white matter in the brain and structural connectivity

- **MAP (Rush-Chicago):**
  - Highest Med Diet adherence associated with less incidence of AD

- **Women’s Health Initiative (US):**
  - No association of Med Diet adherence with improved cognitive function
DASH Diet

- **Grains:** 6-10 (most whole grain)
- **Vegetables:** 3+
- **Fruits:** 4+
- **Nuts/seeds/beans:** 3/week
- **Lean meat/poultry/fish:** 3-6 oz/d
- **Dairy:** 2-3/d (low-fat)
DASH Diet: Observational Research

- **MAP (Rush-Chicago):**
  - Highest DASH Diet adherence associated with less incidence of AD

- **Cache County, Utah**
  - Higher DASH or Med Diet adherence associated with better cognitive scores

- **Women’s Health Initiative (US)**
  - No association of DASH with improved cognition
DASH Diet
Experimental Research

• Smith PJ, et al. Hypertension. 2010
  – RCT of 124 participants with high blood pressure who were overweight or obese and sedentary
    • Tested DASH versus DASH plus behavior management versus control
    • DASH and DASH + behavior improved executive function and memory learning and psychomotor speed.
MIND Diet: What is It?

• Whole Grains: 3+
• Leafy Green Vegetables: 6+ per week
• Berries: 2+ per week
• Nuts: 5+ per week
• Beans: 3+ per week
• Fish: 1+ per week
• Olive Oil: primary
MIND Diet: Observational Research

- **MIND Diet Creation:**
  - Based on factors found in Predimed to be linked with neuroprotection.

- **MAP (Rush-Chicago):**
  - Higher MIND diet adherence associated with less cognitive decline (linear association)
    - Highest adherents appears 7.5 years “younger” in brain health
  - Higher MIND diet adherence associated with less AD (linear)
Fish and Seafood

- **Conflicting studies:**
  - Most have shown reduced cognitive decline, improved brain structures with >1 fish meal/week.
  - A few have shown worse cognitive performance with increased fish consumption.
Coffee and Tea (Caffeine)

- Possible protective effect of coffee and tea
- Moderate intake seems to be positive.
- Increasing or high intake seems to be harmful.
Red Meat

- Some intervention studies: worse cognitive performance
- Observational studies: not being vegetarian was associated with better memory and decreased dementia in older adults.
Neuroprotective Compounds

- **Vitamin E**
  - (nuts, seeds, oils)

- **Vitamin D**
  - (milk, some yogurt, fatty fish, fortified foods)

- **Omega 3 fatty acids**
  - (fatty fish)

- **Plant foods**
  - (fruits, vegetables, wine, whole grains)-phytochemicals, fiber
What about the Gut?

- Potential relationship between gut microbiota and dementia
- Still in research stages
- One study with mice has been done
- Consuming plant foods may help create a healthier microbiota
Discussion

• Assess your diet now.
• What could be added?
• What could be changed?
• Are there other practices you should change?
Questions?